

ABSTRACT

METHOD AND STRUCTURE FOR REDUCING RESISTANCE OF A SEMICONDUCTOR DEVICE FEATURE

A method used to form a semiconductor device comprises forming a polysilicon layer, forming a conductive barrier layer on the polysilicon layer, then forming a conductive nitride layer on the conductive barrier layer. Next, a conductive amorphous layer is formed on the conductive barrier layer, and an elemental metal layer is formed on the conductive amorphous layer. Without the conductive amorphous layer the elemental metal layer would form on the conductive nitride layer as a small grained, high resistance layer, while it forms on the conductive amorphous layer as a large grained, low resistance layer. A semiconductor device which may be formed using this method is also described.